

ABSTRACT

Provided is a ball spline enabling easy machining of a spline shaft by drawing and manufacturable at low cost. The ball spline includes a spline shaft in which multiple lines of ball rolling faces are formed along the longitudinal direction; and a spline nut having a hollow hole for inserting the spline shaft therein, formed in a substantially cylindrical shape, having load rolling faces opposed to the ball rolling faces of the spline shaft which are formed in the inner peripheral surface of the hollow hole, and installed on the spline shaft through a large number of balls. The spline shaft is formed in a substantially circular shape in cross section. Multiple lines of torque transmission grooves along the longitudinal direction are formed at equal intervals around the spline shaft, and the ball rolling faces are formed on the lateral both sides of these torque transmission grooves. Further, a distance between a pair of ball rows rolling on both sides of the land parts of the spline shaft is set larger than a distance between a pair of ball rows rolling on both sides of the torque transmission grooves.